



## SEQUENCE LISTING

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<120> VASCULAR-PREFERRED PROMOTERS

<130> 044463-0264

<140> 10/717,897

<141> 2003-11-21

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<170> PatentIn Ver. 3.2

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 <213> *Pinus radiata*

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<213> Pinus radiata

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<211> 786

<212> DNA

<213> *Pinus radiata*

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<213> *Eucalyptus grandis*

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aaagtaaagg actccaaacc caaattttta tccacaaacg aatttaccca cataaaaaaa 600
ggggagatta tgattaaatt cgttgaataa tgcgaccctt taggagaagg cttattaagc 660
aagcatcgac ggaagctaca cactcctttt ggggagaggc tagtgggtgc aacaactacg 720
attcgggtag agctaagctt tgtccccagt ggcgggtactg ccatgaccag ggctctaaat 780

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caaaacctaa tctgccaacc tcaaaacaaa cgctgtctcg cccccccg ctgcgctata 840  
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<210> 18  
 <211> 563  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 18  
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 ccacaatggg ttgtcctctc gttaccatt ttatatattg caagtttggt gattgattgt 180  
 agaagaaaca cgaaacacac gagcaaaagt aaaggactcc aaaccctaat tttaatccac 240  
 aaatgaattt acccacataa aaaaaggagg gattatgatt aaattcggtg aataatgcga 300  
 cccttttaga gaaggcttat taagcaagca tcgacggaag ctacacactc cttttgggga 360  
 gaggctagtg ggtgcaaca ctacgattcg ggtagagcta agctttgtcc ccagtggcgg 420  
 tactgccatg accagggctc taaatcaaaa cctaactctg caacctcaa acaaacgctg 480  
 tctcgcccc ccgggctgcg ctatataatg cagccgatgg cgtccttcct ttctcgaacc 540  
 ctaagcagat caagagtttg agt 563

<210> 19  
 <211> 524  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 19  
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 aattctcgac atttcagact aataaaatat ttacagatgc aacgtctcac tctctccttg 120  
 caaaaccaga aaggagacagc aagcaagaag agggggaaga gaagacttgc gttttaagca 180  
 aggggagtg tgaactttca agcgacttaa ttaactctgt tagcaccac tttgggtcgt 240  
 ttgatcttct cgtgatttat tatttaccta tgtacagctg cggttgaaat ggcctctctc 300  
 gcttaaattg tagtttgtcc ttttcttggg gtggttgctt tggaaatatt cttttagaag 360  
 caggggcaaa gaaatggagt ggcactctgat gcttcttcaa cactttgcag ccatatcgag 420  
 aatatatacc tagagagaga gagagagaga gagagagaga ggagcagtgg agaagaagga 480  
 gaagaagaaa agggtcagat cagatccagt tgttgggagc aagt 524

<210> 20  
 <211> 638  
 <212> DNA  
 <213> *Pinus radiata*

<400> 20  
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 agcatattcc aactgacata tccctacatt tgggatctct ttccacgta taaatggctt 180  
 caatttaggg atccctttcc acattatata actgggttca cagtgggttg aagatagctg 240  
 tgggtttgaag atagctgtat atgttatcaa aatgacagct cccttgccag ggaccatcgc 300  
 ttgaatgatg agatcccgcc tgtaaggcaa cttgcagcat gattatttta catctgcttg 360  
 accaattatc taacaatata cgcggtgtcg tcgttcggtt aaataatagt gaaacttctt 420  
 cgtgttgctc ctgcagttac gtatgtcttg ttcttttttt tgtttaataa catacagcag 480  
 agcaagtgtt ggggtgaataa atattgggaa gaagctgcag cgttcacgtt cattcattca 540



ctcatcgtga gcagcagtac atcaacagtt cttgaagaac attgataggt tggctatttc 600  
aatcctttca tggggaatat ttaagtcctg atccgagc 638

<210> 21  
<211> 862  
<212> DNA  
<213> Pinus radiata

<400> 21  
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gaatagcaga cgtacgtggt aataataaat ggagtgtgag agttcgaaca ttttaattcg 180  
gaggggcagc ttatgtggaa tatcaggcaa tcatacaagc ttgcttttgg gtaataaaga 240  
cccacatgtg gtaataacaa gtggatttta acaaaccaac attttgatag ggaggatagg 300  
tggcctggta agttagaatg tgctagtcac gcctttgaaa gaagttagtt gtggaagtca 360  
aacatgttcc ccacacaaca cacctcacca cacaaaatgc tggtaggtca tgtgattgat 420  
ggatgggcat gtgtatcctc caaaaaaaat gaatatacac actaaatatt ctattgacat 480  
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ggggaagatt gggtcgtgtc ctgctagcac gttgaatacc tacacgccat ttcacgtcta 600  
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agaagaagtt gaaaaattct ggctgaaaat ccacctaaca cagctcacc agccctcaa 720  
cgaggggcac caattatgaa taataatagc tagaacagag cagcagaagc aaagtttata 780  
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tttcagggga caagtaggtg gg 862

<210> 22  
<211> 693  
<212> DNA  
<213> Eucalyptus grandis

<400> 22  
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tgaatgaaag agcgtcaca tgtaccgtta gatggtatag acctaataat ctgataatct 180  
gatggctcat tgcgttttga gctcacatgg agcgagatta tgtaataatg acgtcaggga 240  
gaggagagga gagaagatga agagaaagct gtggagaaac aaaacacaag gctcgttga 300  
agcaacgtaa acaacagcaa acaacatcaa caacggcgac aaaagaagag agagagagag 360  
agagagagag aggaaacaaa aacaaaagca aaagtgggg agtgaagagg ggaaaagaaa 420  
gatgatgtga aaacaaacca aactctcctt ttcttccacc tctcattttc tgtctggtat 480  
atgggggtct ctctctctct cctctctct ctctctctct accttctctc tctactttct 540  
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ttgctgccat atacatacaa aaaaccgaag cttgtgaaca acccatctct ctctctctct 660  
ctccctctct ctttctgcct gcgaaactgt gtc 693

<210> 23  
<211> 934  
<212> DNA  
<213> Eucalyptus grandis

<400> 23  
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caaattttcca atttagctaa actcaaatecc caaagtatag caattctgtt aaaattttat 180
catccgatag tatagagcaa tttttataa tacttacatt gctcagctca attacaaatt 240
ctatttgtcc acaaattcaa acattttaat gatgcattcc acataaaacc aatggtttga 300
gacacctttt caaaaaaaag aaaaaaatac actagcattg cttagacaag ttaatcaatg 360
aaaaataact ttatcttgtt ttttaattaag gatgaaaagg agttacaaac gcttgtttca 420
agataaatat ttttcaaatec ttttaatatta caagaaataa acggaccttc ttatcaacca 480
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aatttattca atataattca tgaactttct atacatattt agtccatata aaaattaagg 660
gaccaaattg agtattcacc aaaatttttag ggaaaatatt gaataaataa aaagttcttg 720
gaccaaattt catattgaaa taaaattcat ggacaaatca ttattccttg attaaacttt 780
tttatgtaga cacccgtaaa tacaacctgc caaggtttgt ttgcaaggcg tttgcaaggc 840
gtttgcaactt aagcgggacg gaggcgtcac cagtcaatgg gcatgtccag tggcttcccc 900
ggcttgcgaa taggatgctt cctgaatcat ctcc 934

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<210> 24

<211> 408

<212> DNA

<213> *Eucalyptus grandis*

<400> 24

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caaatcagaa gaagaaacga cagtgtagta gtgcagtttc actacaccgt ctatactaag 180
ggtaatcggt tttttgaaag cacatgcata tagccgttgg aaaggggagg gcaccgagat 240
cgaatcggat ggctgatcct cactagccgt tagagagaga gagagagagg gagggataat 300
catgtgcgga catatatccg caatttgctg ctctatttcg cttgtgcagt ttcactactc 360
cccacacaca ctctctctct ctctctctcc ttttcccca aatcagaa 408

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<210> 25

<211> 847

<212> DNA

<213> *Eucalyptus grandis*

<400> 25

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aagacgaaac caccaccaac ccccaaaaa aaaaatatta agggaattcg ttttttgaa 180
agcacatgcg gaggtagctg ttggaaaggg gcctctacgt tcggaaggaa tgcgaccatt 240
ccatcgagat caaatcgaac tactgatgct cactagctgt tgcgtttaaa cttctttgt 300
aaagcgataa gggaattcgt tattttgaaa gcacatgcgg aggtagccat tggaaagggg 360
cctctacgtt cggaaggaa acgaccgttc caccgagatc gaatcggacc gttgatgctc 420
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acaccgtcta tactaagggt aatcgttttt ttgaaagcac atgcatatag ccgttggaaa 660
ggggagggca ccgagatcga atcggacggc tgatcctcac tagccgttag agagagagag 720
agagagggag ggataatcat gtgcggacat atatccgcaa tttgcgtctc tatttcgctt 780
gtgcagtttc actactcccc acacacactc tctctctctc tctctctcct tttcccaaa 840
atcagaa 847

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<210> 26  
 <211> 473  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 26  
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 ttaatcgaga gatgcacaat taataagaga tattctcacg atcttgagat atatagaaac 180  
 cgacagaaaa tatattgatt atctctaata tagaataata ttctagagaa gtattgtaat 240  
 tgtgaccacc aactaaaatg gggcagacaa agtagagggc caggtatagt caaggccagt 300  
 gaaaaggaaa atgaaatgaa ataaaagaaa agaaaagaaa aatcaaattc tccaacttgt 360  
 gtacaggata caccgaagc tttgtgtata taaaggccac ttaatatctc ctccaacctc 420  
 gcaacacatt cgaaagataa gttgcgctta aatcctctcc aaaagagcta atc 473

<210> 27  
 <211> 519  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 27  
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 aactattgct tatgctaaat tggtcattat aataagattt ttagaatact cgttgagtat 120  
 actcaactca agatattata agttttctca attggttttt ctccatttct tatgatccgt 180  
 ccacgagctt ggagtcgctt ttgaagatgt agccagccca acagaaccgt ttccttcac 240  
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 caaccaccgc cataccatct cctttaagca ttccgatgag tccctgatcc accgccttct 420  
 cactgagcct tcccgctctc cctcttctcg tctcactttc tcatataaag aagtgaaga 480  
 atacgaggat actccacttg ggtatcgcca agaactcat 519

<210> 28  
 <211> 216  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 28  
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 ttcctcact ttggcggaat tcgaaacagc gcataaagga acacggaaag aacattctct 120  
 accccaagac gacgacgacg acgacgacga cgacgcgcg ccttatataa accatcgcca 180  
 ctctggcca ttcccttctt tctcccaga tccaat 216

<210> 29  
 <211> 286  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 29  
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aacctcatcg tagacaatca aatcctcctc tcgatcatta ttgcaaagcc aacacccagc 180
attgaatcga tccccacctt ctccctcctc tctctttgat cctttttgtc ccgatgatga 240
tgggtatctg atcagccgat tcaatcccat cgtctccttc cttctc 286

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<210> 30
<211> 168
<212> DNA
<213> Eucalyptus grandis

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<400> 30
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aaagctgata tataaatttt tgggaaccac aaccaccatg tctcgccacc ttcgctcgaa 120
ccttatcacc accaccgccc ttgagccctc ctccatcaac tcttcttc 168

```

```

<210> 31
<211> 748
<212> DNA
<213> Eucalyptus grandis

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<400> 31
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aaaaaataaa aataaaattc taaaatatta aaatattatt aaaagttgtc cacgtcagcg 120
ttgaggccac gttaactagc cgggtgctgag tcagcaaaat tcggccaaaa ttggcacaaa 180
aaaagggttta ggactttttt gacgcttttc ccgtcatgag cctaaataag aaattttaat 240
ttcttcatac cataccaatt atttgatatg agatttttct aactaattca cacatctatg 300
ctaacgctac tcgctcaaaa agcgtcaag ctgaagccaa gtttcaagca tcaagcttat 360
aagccgagcc aagctcgagc acggtgcttc tttctcggc ctgaccgat tagactcttg 420
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catttatatta cctccctggt aatgatattg cagagcattc aatttaaaga ttgtgaaatt 540
tctgggcatt tatttacctc cctgttaatg atatttttat ggaatagcgt gcaaagaatt 600
cgggtgcata gtgttgctct tctcccaacg cccctttata taatctccga acggagcaag 660
catttgcctc tccgtaccca cggcattttc cttctcgtga ctttttcccg agaaaacaag 720
aagaagagaa aatccttcca ttgcatcg 748

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<210> 32
<211> 1161
<212> DNA
<213> Eucalyptus grandis

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<400> 32
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ctgcttttct tcgctctttc ggccaacttc ccagtcgatt catcggtcta aagaatagac 180
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tcatagagaa caatttatat aaaccttctc ccagcctaata agcatgcct ggttctctaa 420
tatcaaagaa aaagaggagc tagatctcgc ctttagaatg attggaagta attgcagtta 480
gcttgaagac attcgtagat gtcgattgat caatgctttt ggaagtacta gagatgcgca 540
cgcatacgtg cgatatccaa actatttccg ttgaccctca cgaaaatctc cgtacagacc 600
gttgttgcta attcttttatt tgccgtaaaa tctgcatgaa tccataaatt caatgattcg 660

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aacgtgacgc agaggaagtt atgcattcca aaagatagca tttattttta ataaagaagt 720
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aattttgtgc tgtcaatttg actataaata cccgcccgtt gtgctccaa atcgagtga 1140
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<210> 33

<211> 563

<212> DNA

<213> Eucalyptus grandis

<400> 33

```

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ccacaatggg ttgtcctctc gttaccatt ttatatgtg caagtttggg gattgattgt 180
agaagaaca cgaaacacac gagcaaaagt aaaggactcc aaaccctaat tttaatccac 240
aaatgaattt acccacataa aaaaagggga gattatgatt aaattcggtg aataatgcga 300
cccttttaga gaaggcttat taagcaagca tcgacggaag ctacacactc cttttgggga 360
gaggctagtg ggtgcaacaa ctacgattcg ggtagagcta agctttgtcc ccagtggcgg 420
tactgccatg accagggctc taaatcaaaa cctaattctg caacctcaaa acaaacgctg 480
tctcgcccc cccggctgcg ctatataatg cagccgatgg cgtccttcct ttctcgaacc 540
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<210> 34

<211> 524

<212> DNA

<213> Eucalyptus grandis

<400> 34

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caaaaccaga aaggacagc aagcaagaag agggggaaga gaagacttgc gttttaagca 180
aggggagtg tgacttttca agcgacttaa ttaatctgt tagcaccac tttgggtcgt 240
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caggggcaaa gaaatggagt ggcattctgat gcttcttcaa cactttgcag ccatatcgag 420
aatatatacc tagagagaga gagagagaga gagagagaga ggagcagtgg agaagaagga 480
gaagaagaaa agggtcagat cagatccagt tgttgggagc aagt                                     524

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<210> 35

<211> 1795

<212> DNA

<213> Eucalyptus grandis

<400> 35

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ttatgacatt tcattttttt tctaatacaca tcaaattact ttagaataac tatccagctg 180
ccaaaaaaa atagtattgt atatctaaaa taaatatatt gacaaatgcc aactaaatta 240
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cttttatttta ggaacagtat ccaccaaata tgttcttttag cttaaagaatg atatatatta 420
tttttaaaat tgcgattgga ttcttcatat gttatatctt gttcaaatat tattattttg 480
atgtgattttt caaaataaaaa cagaaaaata aatctcatct cgttcctttt ttcaatagtg 540
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cccaacttta aaactgggtgg gtgacattcc aaatgatcat atgggtcatat actaattttc 660
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gccatatcga gaatatatac ctagagagag agagagagag agagagagag aggagcagtg 1740
gagaagaagg agaagaagaa aagggtcaga tcagatccag ttgttgggag caagt 1795

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<210> 36  
 <211> 542  
 <212> DNA  
 <213> *Eucalyptus grandis*

```

<400> 36
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aggaataaga caaagtgaag gagaaaaagg aaaaaaaaag taaagtaaaa taaaatatca 120
ttaaaaattg tgtatgtag ggttgtagg catttatgtc cgcaccaatt gacgcattta 180
tgtccgcacc aatcgaacca tttatgttcg caccaatcga cgcatttatg tctgcaccac 240
tcatctgcac caattggcca aaattggcca gaatgattga attgacataa ttgcaaaata 300
tctaagactg aacaagcaaa aaaaaaagtt atgaccgaat tagaaaaatt acaatagatt 360
tatgactttt tttgtaattc cccccaccta actctgtcaa acctgcta atagactaat 420
tcattcatat atttatatat acacactcat aggttgatat atgaatatgg gggtacgtat 480
aaccctatgt gctaaaatct tggagaactt cctattcata tcagaagaag aaccgatcct 540
gt

```

<210> 37  
 <211> 858  
 <212> DNA  
 <213> *Eucalyptus grandis*

&lt;400&gt; 37

```

aaaacagatt gtttttagatt gataacgttt tcttatcatg ccggcatcat ctcaattttg 60
aattatatcg gagcattaata tataaaaagtt aggttacgga tgaatgataa cgcagacctt 120
gtgagaaaat tagtataatc acgataaaaa tatccatata gacatcacaa aaatgccgcc 180
cgatctgatg aaatccgaca aataacacaa acatatatat gtccaagact tggacttcaa 240
gtcgacatgc ttgtgcatgc acaattttgg gccataaaat tgggcatgtg agaacctcaa 300
accgtaaga gatcaggtat ttactttgtt tgtcgactga cgagacgtgc acgcatttca 360
caccctcttc tcattgatct tcaaagcttt tccgaactca cgatgggtcc agaaaggcga 420
tgttttgctg acagagggag cgttcgatgg agcttctcca tcaacttaatt tgtcccttca 480
agatgaaaaa agtaagaggt ccaccgtacc aaaacattct tccaccaga agaaaaccac 540
agtagctgga gggagtcaag catgtcagaa gcacagaaac tgggaatggc taaaaagcaa 600
gtcttgacc ttaaccacc ccactgggtc acctaccgca cctcgggtta ggtattgctt 660
gtcgaggtgt cacttttcgc caaagtcatg tctctctttt ggaatcttct tattggctcg 720
tctcgtttcc tcgttgctgg atgctggtag cgtttttgtc catatatata tgcagtccat 780
atgtatcccc gtcactcttc atctatgctc ctaccgggca acttcccact acgataagca 840
gcaagttttc ggtctgt 858

```

&lt;210&gt; 38

&lt;211&gt; 547

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 38

```

atcaggtatt tactttgttt gtcgactgac gagacgtgca cgcatttcac accctcttct 60
cattgatctt caaagctttt ccgaactcac gatggttcca gaaaggcgat gttttgctga 120
cagagggagc gttcgatgga gcttctccat cacttaattt gtcccttcaa gatgaaaaaa 180
gtaagaggtc caccgtacca aaacattctt ccaccagaa gaaaaccaca gtagctggag 240
ggagtcaagc atgtcagaag cacagaaact gggaaatggc aaaaagcaag tcttgacct 300
taaccaccac cactggttca cctaccgcac ctcgggttag gtattgcttg ctgaggtgtc 360
acttttcgcc aaagtcatgt ctctcttttg gaatcttctt attggctcgt ctcgtttct 420
cgttgctgga tgctggtagc gtttttgtcc atatatatat gcagtccata tgtatccccg 480
tcactcttca tctatgctcc taccgggcaa cttcccacta cgataagcag caagttttct 540
gctctgt 547

```

&lt;210&gt; 39

&lt;211&gt; 862

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 39

```

aaacactttc tgtaaactta tttttgcaaa caatccaaag ccaaaaaagt aaagaaacta 60
ttttcagata ggaaattttt ctcaaaacaa ggatcgtcga tgggactgga gctctcagcc 120
caaaaaagaa aaaaagaaaag gtaatgtgat gtaagagaga ggaaagtaaa gttgaagaac 180
gtgtatgcaa agcgacatga tgggggagag catttgatgg acaatcattg ggccaactca 240
catgaagtcc ttacaacaaa cagttggagg acgatgcagc tccagctcga ttcagcgact 300
ccaattatat ttccctctct ggtcctctcc tctttccat gcgcaatcca gctaagtctc 360
tattccatgg cccctttgct actagggcca catctgccag atatttttct ggtatgcagc 420
taaaagcata gtagtgcctt ttggaaaagt tgatcatagt aactgggctg gtccagttta 480
attagagcaa tctatgatga aattactaat gaatttttgg gaagttcggg ttttggtttc 540
tcggaatttc tcaccaatat cattgcttca atattagtta aaatagacga ctgaaaagat 600
catgatagat aaaaaaagg gagtgccaa attattttct tctaattctt acttaactta 660
agcttcatgc atgctgcccc tcttgtgttt ggtcattaac taacctagaa ggaggggggg 720

```

```

aaaaggtaaa acatgtcata aaagggttag ttagaccctt caccctaaat gattgcccaa 780
tgccaccact ttaatcatca actttccaac caacacttgt ttttttggct tccctttctt 840
atcctccatt ctcctctctc ct 862

```

```

<210> 40
<211> 611
<212> DNA
<213> Eucalyptus grandis

```

```

<400> 40
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agacgacaga cgcaatttac acatgtccga gacatacggg catgaaatgg gaattctgat 120
gtagaaatag catgaaccca tttagcaaaag aattgagaac tgggccggaa ctctgctcgt 180
gttaactaat ccaagcgtcg gtcaagctgt gcgcacgcat ggggtgggaag ggggcggggg 240
taggtgcaca gggaatttgg tttgggggtt agagtgtgtc aaaagccgaa acggtgttag 300
gcattgggct ttttggtttt cggcttcaag acaatttgaa ggggagatgg ggcgtgccat 360
ctgctctccc cctgccatat gacccatcat cccctctcca tctccatcta cctctacct 420
ccccgcgcc cttctctctt ttctctcttt ctcttctctt cttcgaaaaa ttttaattta 480
ttaaataatt tattgcccct cccctctccc ctctccaaaa ccgaatttaa cccaacctc 540
tctctttccc tccacccaaa tctctacaca tcatcatcat catcatcatc atctctctcc 600
ctcccttttc t 611

```

```

<210> 41
<211> 498
<212> DNA
<213> Eucalyptus grandis

```

```

<400> 41
aaaatcattt aacggcttca cccaatatac tagttatctc ataagtggca atctaaaaaa 60
aaaaacacta tagttacgtc gatgaaagggt ccgacttatac tggtcgaaat cagaacctga 120
atctctatta ttgatctaaa caaatcacgt cgagtgtgat ctagtttatg aaaaatacta 180
caaagaaatg aaaaaaaaaa tggtaaattg aatgcaattt attagcaatg ggtttgaaaa 240
ttagtaatat tatatctatt gtcattgcaag atatgaatat tttagatcct tctagaagca 300
cggataactt atgactcgat gttttcttaa atcttttgac acttgtcatt ttttcataga 360
gaagcgacga gaagatcttt cgcggtgtgt tcacctaccc caacctttgt cctatgcac 420
cttggtgag atgtcaacct taggcttccg acaccttga ctctctctcc tccatcgctc 480
tcattctctc cctgtata 498

```

```

<210> 42
<211> 362
<212> DNA
<213> Pinus radiata

```

```

<400> 42
aaaaaagttt cccaatctct aagcaaccat aaagctcaac cactctctgt cctgtgcccc 60
aacgtctacc agacgattag gtatgcaactg cagttcttcg tctgtcatgc taccagacag 120
ttaggttaacc actaatgtct taggtgggtga ttgatattga tgtttcttct gcaaacatgt 180
gaatcaatgt gtatcgctgg aatatgacac tgtggatcac tggatataca tagagagatc 240
tgctctgtcc atttttaaca gattcatctc aattttcttg ttccaatgtc aacattttct 300
caactgctct gccccatctt tattaaaagg gaacatctac cctgcatttc cacactccaa 360
tc 362

```



<210> 43  
 <211> 810  
 <212> DNA  
 <213> Pinus radiata

<400> 43  
 cctataaaaa aagattttat taagagcatt tggaaaacta tcatctttcc aggaccataa 60  
 aactattttaa tagttcaata aagatgaagt agttactatt taatagttta ataaaaatta 120  
 agtagtctaa cagttatata gttatatata tgtgtgtgtt ttgggtatgt tttcagggtg 180  
 aatgatgtat aattgagtaa ggattttttt tgggaattagt gaattttttt ttttcagaat 240  
 aacaattcta tatatatcat aaaaataaat tttaaataaa aaaaatctaa ataaaaatta 300  
 tttaaaaaaa cactaaaacc attagtatac caacacttca atttaatgat ggataaaata 360  
 ataagctagc tctgcttaac attacactgt ggtgagtttg acatgaaaaa atagatctct 420  
 gctttcagaa gtacgcattt ttaaatttaa aaaagtttcc caatctctaa gcaaccataa 480  
 agctcaacca ctctctgtcc tgtgccccaa cgtctaccag acgattaggt atgcactgca 540  
 gttcttcgtc tgtcatgcta ccagacagtt aggttaaccac taatgtctta ggtggtgatt 600  
 gatattgatg tttcttctgc aaacatgtga atcaatgtgt atcgctggaa tatgacactg 660  
 tggatcactg gatatacata gagagatctg ctctgtccat ttttaacaga ttcactctca 720  
 ttttcttggt ccaatgtcaa cattttctca actgctctgc cccatcttta ttaaaaggga 780  
 acatctaccc tgcattttca cactccaatc 810

<210> 44  
 <211> 334  
 <212> DNA  
 <213> Pinus radiata

<400> 44  
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 ccttgcaaaa ttcaggactt gctctcacca acctcgccag gactttgacc gtgctcatgc 120  
 ttgtgtcatg cttgcatatc tatacgtgtc acatcgaccg tccgatctat catgaaaaga 180  
 acggtcatga tgaaatctca actaaaccca ctgcgtaa aa ttttcgaaca gtgagaaagt 240  
 aatcgtataa ataccctaa gctcttagac cgagaacgca tgcagcatc ggctctcatt 300  
 ctgaggttca tctggctgaa gtttgaactg tgct 334

<210> 45  
 <211> 476  
 <212> DNA  
 <213> Pinus radiata

<400> 45  
 atcatcacca gtgccaccta agaacgcgtt tgtattgaga taccatctat tttttcggat 60  
 gcaattacta gtttaataatt tataacatta ttaggggtgg ggtccagaaa aatgaaaaaa 120  
 gaaaaagaaa attgaaattt taaaactaat tttcaaaata tgaggaaaaa agcgagacca 180  
 cgaaaaaatc attgaaaaag accttgcaaa attcaggact tgctctcacc aacctcgcca 240  
 ggactttgac cgtgctcatg cttgtgtcat gcttgcatat ctatacgtgt cacatcgacc 300  
 gtccgatcta tcatgaaaag aacggtcatg atgaaatctc aactaaaccc actgcgttaa 360  
 attttcgaac agtgagaaag taatcgtata aataccctta agctcttaga ccgagaacgc 420  
 atgcagcatt cggctctcat tctgaggttc atctggctga agtttgaact gtgctc 476

<210> 46  
 <211> 536  
 <212> DNA  
 <213> Pinus radiata

<400> 46  
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 aggaagatgt ttgcagtcgt aaatatgagc gcaatggcct ttagtccacg cgtagtggca 120  
 catcttacac ggatacttgg ttttcagccc cacacaactg caagggttgc ttcgaaggta 180  
 actcttacgt tggtttgagt gcccaaaaca tattagcttt ttattttgtg tcaactgtcga 240  
 catcgttggc cctaatttta tcgtatgac aggcctgat ctctctcgcc accatttcct 300  
 tataaggcgc cagcagacaa gcacagctct ggaagggaaca tgggtgagt acattaaagc 360  
 aacgcgatga cctcatacca gcttcaacag cttacaccat aagacacgt tccccatgga 420  
 catcctccta cgtatcactc acttgccat atattcatgc aactccgtca cagttttata 480  
 ataattcagg tgccttttat atcagtagta tcaacggata caccagggt gattgt 536

<210> 47  
 <211> 680  
 <212> DNA  
 <213> Pinus radiata

<400> 47  
 aaattcatgt ttgtcatagg ttatggtatt ttgcacacat gaaacaaatt ttacaattga 60  
 ctttgattaa gatattaaat ctacaatagg ttatcaactc cacgtgataa tgaagtaaaa 120  
 agactggatg gctaagtcaa taaaacaacc aaataatcaa gcaatgatag cttctatcaa 180  
 ataaggatgg ttcagctaga tccaggcgaa atatgattca gccagatacg aaaaggcgag 240  
 cggttgaaat gtttgaaatgt ttgcggggtc cctgggttgc tcggagggtta ttctacgtaa 300  
 tttattcggt ataccttgcc ttctaagcat cgcaaactgt gatttcttaa caaactcgat 360  
 gcatgcgcca taaccaacaa aaccatttag ttgagtttac ggtcttcaca attcatgctc 420  
 agtcaccttc aactattatg acagattagg tgctacttat tctctcgtaa cccttttagag 480  
 tgaactttta tccaaattgt caggtgattt gggccccag gcgatggatc cagcgacagg 540  
 ggaacgcaag tttggtggtt gtggcagtc agttggtatg cccagagag ttttaagact 600  
 tcagatttgt gttcagtatc aggagctgct atggaaaaag caaccatata aaactattgc 660  
 cattcgcaca ggaacagaac 680

<210> 48  
 <211> 1607  
 <212> DNA  
 <213> Pinus radiata

<400> 48  
 cctttgggaa tgaactttga gaccacctcc aaccgggatt ctgaaatcca tccagcaatt 60  
 ccaaagttcc aaaccgaaat aaacatccca ccataccatg gcattcggaa aaaagctagg 120  
 ctaagctgaa aatcactgtc ataaccagc aagaccatgc cactaatagc aagagaacca 180  
 tacaccaaca tgcaaagcca tgcattgtcc aaccagctag gaaatcacac atgcaaagg 240  
 ttacctgcaa gtattcctgt tgaagttgct tgatcctact ttcttttcct tgagccttgc 300  
 ttgccttctc ttcttttgc tgaatttctc ttcttgcctc caaactagag tgctctaaga 360  
 aaactctaag tgaccaagag agtgagagag agagagaata atgagagtcc aaacatgaac 420  
 ttgacaaaag ccatgaactg atcctcagaa gtcattttat gcacgaggct tctattttct 480  
 tcattttcca tcattttcct tcaatttctc catcacatgc aacgtgcgac ttttcacccc 540  
 gttttcctcc taatttcttt tattttcata aataaatgtg ccaaaaatgc ctcttgccct 600  
 agcctttgcc agtttcctta gccaaaacac acatccaatg atgccacta ggatatcttt 660

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gcccaacatt aagcctggaa taaatgtctc ttaatcgtgg tcttattttg cttttattaa 720
cttttattac atgaactttt cactaaagct attacaaaga tatattttatt atggcaatta 780
tgtttgattt ttgaagagct agtaactttt agttttattat ggctttttcc gtaaacttat 840
tttcttgaaa atctctataa atccaatgaa aaattttatag aatatatgtt gtgttttctt 900
cactacctct aataaatttt ttacttagta atctacaaag ccatttatta aaaaattcaa 960
gttaattaaa aattaatatc atttcaaaaag tctttttaat atagtcaaag tttattaaat 1020
tctatgatgt atatttcttt taaataaatg aagaatccat ttttttactt aaaaccatat 1080
attttttata acgttgataa atagcatgca tttatataaa caaatatata tttttataac 1140
gttaagagat tgtaaaaact tttaaataat taatatttta tttattgttt tgaaaatgtc 1200
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accacaata tatttttggg atctgggtgc cccacctttg atcacagtga acaccataaa 1320
gacaaattat aaaggcaagg ggacttgga cccactgggc aaccgaaagc aacaaatcat 1380
ttttttccaa agagatgagt gtatgccaac gaagaaacac gatgaaccca cgtgtcattg 1440
gccaaactccc actttcgaca aaaagaagga aattagaatt aaaaaggcga ataaaaattg 1500
aaaggccatt taaaatagaa ggaagaatag cctatatggt agattttaat gcttttttga 1560
aatccggtta ctgcgaagat tatcaatcgg gactgtagcc gaagctt 1607

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<210> 49  
 <211> 881  
 <212> DNA  
 <213> Pinus radiata

```

<400> 49
aaattagtca aatccaaagc agacaacttg ggctctcacc taaattaaca catataccct 60
accagcttcc atagtttcca acttcctttc aataaatcta ttcaaaagca tgaaaagcat 120
gactaagggt caattcccaa gttatggaca cccacctgct ctaggcataat aggaaatcac 180
aatccaacta acgaccaact acccaaaact ttgaagaaaa tgagtaaaga ctccccagct 240
gatattataa ttatatgggt tctctagaac cttttatttg cccttccagt gttatattta 300
gttccccatt tatatatccc ttgacttatg aaaccattta ggtgcattaa catagtcctt 360
gactaacaaa aaaattattt aggtgcagta gatacggaat gtaaccaatg atgctaagaa 420
actgtgcacg tacttttaat gaggtattac ttttattatg gttggtttgg atacattcat 480
aatggaagca tgtgtctctc atcgttaaag ttgtgggtgg gcattcccca tttccacga 540
gaaaccgaat cccggcgtgg agacgacgac gaaatcgatg gatattcggg ggaaaattca 600
cagtaaaatt cctggagaaa aagggtgccc aggtagttga aatccaaacc gccgaaatga 660
gctggaaaacc cgccttctgt cagttagttg agtcatgact gcagctgtct caggctctac 720
actgtaaagg caccttaatg aggcattcat tctggcagtc tggctacgga acttaaatgt 780
acttgttatt cctgccccaa tatctattta ataggcatcc ccctcacta cttcttgccc 840
acaatccctc catagtcctg agcttgagac catttttctg c 881

```

<210> 50  
 <211> 900  
 <212> DNA  
 <213> Pinus radiata

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<400> 50
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gatgtcacat tattggcata taacaaaatc tttaggataa ccccttagtc aagctcttgt 120
actttcatgt ttattaacca ataaatcaag ctgatatgga atagcagacg tacgtggtaa 180
taataaatgg agtgtaagag ttcgaacatt ttaattcgga ggggcagctt atgtggaata 240
tcaggcaatc atacaagctt gcttttgggt aataaagacc cacatgtggt aataacaagt 300
ggattttaac aaaccaacat tttgataggg aggatagggt gcctggtaag ttagaatgtg 360
ctagtcatgc ctttgaaaga agtttagttgt ggaagtcaaa catgttcccc acacaacaca 420

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cctcaccaca caaaatgctg gtaggtcatg tgattgatgg atgggcatgt gtatcctcca 480
aaaaaaaaatga atatacacac taaatattct attgacataa tatacaaaga agattaggtc 540
tatggaagaa ggaagggcga aggggaagat tgggtcgtgg ggaagattgg gtcgtgtcct 600
gctagcacgt tgaataccta cacgccattt cacatctacc catcaacgtc aaatagagca 660
tccaaatcag ggcgtggtgg tgtgagggga gagtgaggag aagaagttga aaaattcttg 720
ctgaaaatcc acctaacaca cgctcaccag cccctcaacg aggggcacca attatgaata 780
ataatagcta gaacagagca gcagaagcag agtttatatc tatccattgt cgtctgtaaa 840
ttactctgtg agtgtttagt gttttcttct cttattgatt tcaggggaca agtaggtggg 900

```

<210> 51

<211> 603

<212> DNA

<213> Pinus radiata

<400> 51

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aaacaccaat ttaatgggat ttcagatttg tatcccatgc tattgactaa gccatthttc 60
ctattgtaat ctaaccaatt ccaatttcca ccctgggtgtg aactgactga caaatgcggc 120
ccgaaaacag cgaatgaaat gtctgggtga tcgggtcaaac aagcgggtggg cgagagaacg 180
cgggtgttgg cctagccggg atgggggttag gtagacggcg tattaccggc gagttgtccg 240
aatggagttt tcggggtagg tagtaacgta gacgtcaatg gaaaaagtca taatctccgt 300
caaaaatcca accgtcctt cacatcgag agttgggtggc cacgggaccc tccaccact 360
cactcaatcg atcgctgcc gtggttgccc attattcaac catacgccac ttgactcttc 420
accaacaatt ccaggccggc ttctgagaca atgtactgca caggaaaatc caatataaaa 480
ggccggcctc cgcttcttc tcagtagccc ccagctcatt caattcttcc cactgcaggc 540
tacatttgtc agacacgttt tccgccattt ttcgcctgtt tctgcggaga atttgatcag 600
gtt

```

<210> 52

<211> 1631

<212> DNA

<213> Pinus radiata

<400> 52

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atcttatgga gtttttaaat atatatatat tttttgggtt gagtttactt aaaatttggg 60
aaagggttgg aagaactata aattgattga gttgtgaatg agtgttttat ggatttttta 120
agatgttaaa tttatatatg tagttgtgaa ggagtgtttt atggattttt taagatgtta 180
aatgtgtata tgtaattaaa attttatttt gaataacaaa aaattataat tggataaaaa 240
atgttttgtt aaatttagag taaaaatttt aaaatctaaa ataattaaac actattattt 300
ttaaaaaatt tgttggtaaa ttttatctta aatttagtta aaatttagaa aaaaaataa 360
ttttaaatla ttaaaacttt gaagtcaa atccaaatg ttttcaaaa tattaaattc 420
atttgacatt caaaatataa tttaaataa aaaacttcat gaaatagatt aaccaatttg 480
tatgaaaacc aaaaatctca aataaaattt aaattacaaa atattattaa cattatgatt 540
tcaagaaaga gaataaccag tttccaataa aataaaacct catggctggt aattaagatc 600
tcattaatta attcttattt ttaattttt ttacatagaa aatatcttta tattatatac 660
gagaaatata gaatgttcta gtccaaggac tattaatttc caaataagtt tcaaaatcat 720
tacattaaaa ctcatcatgt catttggtga ttggaaatta gacaaaagag aatcccaaat 780
atttctctca atctcccaaa ataaacctaa ttaatatagt tcgaactcca ttttttggg 840
aattgagaat ttttctaccc aataatatat tttttttata catttttagag attttccaga 900
catatttgct ctgggattta ttggaatgaa gggttgagta atgaaggttt gagttataaa 960
ctttcagtaa tccaagtatc ttcggttttt gaagatacta aatccattat ataataaaaa 1020
cacattttta acaccaattt aatgggattt cagatttgta tcccatgcta ttggctaagc 1080
catttttctt attgtaatct aaccaattcc aatttccgcc ctgggtgtgaa ctgactgaca 1140

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aatgcgggccc gaaaacagcg aatgaaatgt ctgggtgatac ggtcaaacaa gcggtgggagc 1200
agagaacgcg ggtggtggcc tagccgggat gggggtagggt agacggcgta ttaccggcga 1260
gttggtccgaa tggagttttc ggggtaggta gtaacgtaga cgtcaatgga aaaagtcata 1320
atctccgtca aaaatccaac cgctccttca catcgagag ttggtggcca cgggaccctc 1380
caccactca ctcaatcgat cgctgcccgt ggttgcccat tattcaacca tacgccactt 1440
gactcttcac caacaattcc aggcgggctt tcgagacaat gtactgcaca ggaaaatcca 1500
atataaaagg ccggcctccg cttccttctc agtagccccc agctcattca gttcttccca 1560
ctgcaggcta catttgctag acacgttttc cgccattttt cgctgtttc tgcggagaat 1620
ttgatcagggt t                                     1631

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&lt;210&gt; 53

&lt;211&gt; 1163

&lt;212&gt; DNA

<213> *Pinus radiata*

&lt;400&gt; 53

```

aaacagagca gataacacta aaaagaccaa ccctgttagg aggggagaaa caaaaaagat 60
cacactaaaa agaccaaccc tcttatctaa acttattttc tcttatctct accccttcta 120
ttttgaacct ttatcatttt gatagaaaat atagtgttaat aaccattaaa cctacattgt 180
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&lt;210&gt; 54

&lt;211&gt; 638

&lt;212&gt; DNA

<213> *Pinus radiata*

&lt;400&gt; 54

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aggcccaatc ttaatttgat atgtttgcca aaccttaggt tgtttatcta atttttgatt 120
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aaagcacttg gtctgacca tctgtgtctg attcacactg ggattcacat gttatttaag 480
aaaagttgca tcagtgtctg aatcatcaag ccattcctaa tttaccacca tgattagatt 540

```

attttaatgc aagaaaacgc ctatataagg agagctgcag gcccgaaggt aatgcagtaa 600  
tcaaaactga ggagagattt gagagtgttt gtgaaggg 638

<210> 55

<211> 786

<212> DNA

<213> Pinus radiata

<400> 55

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cttgtcttac tattatttta cgtaattctg tctttttgac agtggattga ttggaacttc 180  
cattctcgat acagttgtat gcgttatgtg aactgaacca acctcggcca aaatatgggg 240  
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caaaattgat gagaaagttt tgaggggtgg tgataaagta agcgcgtctt ttcacaggca 720  
tctgcattat aaacctgcaa ctccaacttt catcacaaca aatttcattt tccccttctc 780  
tgaggc 786

<210> 56

<211> 1302

<212> DNA

<213> Pinus radiata

<400> 56

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tataaatttc ataatactat tcatcccatt ataaatttca taataacttc taataacca 180  
ttataaattt cataatacta ttcattccaa tatgtgctac catttagata tttttgagcc 240  
aaaacccaac ccgaacaaaa atttgtaatc tcgagattaa tcacaaaatt tgactcgatt 300  
catatgcaaa ttggaataat tactcgatc ggatgagatc ttaccgttgg tgtgatcatg 360  
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ggatgaccat tgatgacgac caagcttgac acgattcata tgagagaaaag aactcaaaca 480  
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caattagtta ccccaatgg gcattggact tgcttttgc ttgatgtcga aaacaagggg 600  
ggatttcttc tctttaagaa aaatagaaaa acaaaaacc ctgcacagct gggttctcct 660  
ttcttcaagc ctgggttggc ttcaacataa agaaacaaaa cccattccat ggtgttgtct 720  
tattgtgggt ttgcctaatt caatgttatt agtgggtgaa acttcattac agcaggatgg 780  
gagagccaac ctcaagagag tgactctgta accatcaatc ttccgcattg cctgctgcc 840  
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ttggcggctc tgacagtaca gttagtagag actatctatt ttccgtgtac acaacgcttg 1200  
caatgcagat ctgggcgcta ttataaaaga tcaacaaga gctaggcttt cagaattgcc 1260  
tgaaagctgc tgccaattgc atagatctgc tcaaggcacc ac 1302

<210> 57  
 <211> 638  
 <212> DNA  
 <213> Pinus radiata

<400> 57  
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 agcatattcc aactgacata tccctacatt tgggatctct ttccacgtta taaatggctt 180  
 caatttaggg atccctttcc acattatata actgggttca cagtgggttg aagatagctg 240  
 tggtttgaag atagctgtat atgttatcaa aatgacagct cccttgccag ggaccatcgc 300  
 ttgaatgatg agatcccgcc tghtaaggcaa cttgcagcat gattatttta catctgcttg 360  
 accaattatc taacaatata cgcggtgtcg tcgttcggtt aaataatagt gaaacttcct 420  
 cgtgttgtcc ctgcagttac gtatgtcttg ttcttttttt tgtttaataa catacagcag 480  
 agcaagtgtt ggggtgaataa atattgggaa gaagctgcag cgttcacgtt cattcattca 540  
 ctcacgtga gcagcagtag atcaacagtt cttgaagaac attgataggt tggctatttc 600  
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<210> 58  
 <211> 1350  
 <212> DNA  
 <213> Pinus radiata

<400> 58  
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 ttggaggatc tattaagaca aaagctctca tgtatttcct ttacatgcat gcacatttat 180  
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 acagacgaga tacaaaatga tgattatgtt taatttttga aactttcact tattaatttt 360  
 tgtgacgcat tcataacata ttatgttagt atatatgttc gtccacaggt tgttggttt 420  
 ggtaacacta tactagtatt tctttgtgat tattttttat gtaatgcaat atagccctaa 480  
 atgaatattg tgaaagtgat atttttcagg agcatcaaga ccatcttcat ttgtaaatat 540  
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 gaagattatg taaatattat tttctaaata aaaggatatg agagaatagt ttaggaaaaa 660  
 gaattgggat agaatttcta tgttttttca attaaaatta ggataagaat ggagaataaa 720  
 gcttcacgct ttaaatcatt atgtaaaacg gaaaaagcct gctttttgtaa aagataagg 780  
 ctgagaagac ctatccctta tgtatgtatc cgttattatt ataaataaag aggtagctaa 840  
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 attgttaata tggatgcgcg tagttaatag tttatttgga ctgtgtatta agcattgaat 960  
 ggtagctgt atagtgtatc aaaatgacag ctcccttgcc agggaccttc gcttgaatga 1020  
 tgagatcccg cctgtaaggc aacttgacgc atgggtattt tacatttgct tgaccaatta 1080  
 tctaacgata tacgtggtgt cgttattggg ttaaacaata gtgaaacttc ctcgtgttgt 1140  
 ccctgcagtt acgtatgtct tgttcttttt tttgtttaat atcatacagc agagcaagtg 1200  
 ttgggtgaat aaatattggg aagaagctgc agcgttcacg ttcatcatt caccatcgt 1260  
 gagcagcagt agatcaacag ttcttgaaga acattgatag gttggctatt tcaatcctct 1320  
 catggggaat atttaagtct ggatccgagc 1350

<210> 59  
 <211> 700  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 59  
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 atataatccg tcagtcaata ttaatcggaa ttgttgacgt agcgatgcgc cacgtagaat 120  
 gactaacgat ggctaaaccg ctatagtagc gatttctgac aaatattaac tgaatgacta 180  
 tattttcctc attattcagg ttatattgtt ttgttttcat gctatttccc caatagcaaa 240  
 tttgttcacc tgctcctgga aattccttac gacgactcac cacttattct aacgaatctg 300  
 atgggtgatt cttgatatta tttgaccatg acataataaa tgtcaaggga aaaagagaaa 360  
 aaaataagaa aagcgaagaa atccaccggt catcattagg acagacacat tatacgccgt 420  
 cataagggaa aatgaaattt aactaaacat cactaacgtc aaccaaactc gaaaacaaaa 480  
 cttgaactgc agtagctaga tgtagctctt gggttcagccc ccagaacccat cgcctatcgg 540  
 gttgatgggt gaagatgtga tcttggtcct aatcacctaa tcaacgaacc accgtttctc 600  
 attcgctccc tccgtataaa aacctcgagg cttgtcctat cttggagcat cgcattccaag 660  
 aaacaccatc tcattcctgtc tcagtcccca tcattcattg 700

<210> 60  
 <211> 1032  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 60  
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 tttgattttg acacttaagt attactttcc aaagttttga cacttaagtg tccattcgca 180  
 ctaagttttg gcatttgagt gttcctccgt atcaagtttt gacatttgta atgtactttt 240  
 gtcataatg ctaatgtgat aatgagacta aattaaacat atattaaaaat ttcagaatct 300  
 acattaaata atttaaaaaat ttatgaatca tattacatat tacgataaag ttcaagaact 360  
 atattaaaaa aattaaatat ttatgggtca cattacatac gagtgaataa ttaaggacta 420  
 tttattttgt tattttcttt tccattaaca aaaatcttcc ccacctcatt ttaaattcga 480  
 gaaaagaaga aaagcaaaga aaaataatag agaggaaggg acccaactcg agattgggct 540  
 ccattgatgg aaactcgcga tctactccat ctgcactcga cagcccatcc tctgaagata 600  
 acatcatcgt ccgcaccgca ttgcacccta ccttctgggc tgaatgacca cattgcccct 660  
 ccaccaaatac tatccgttgc ctgcaatgcc ggatggcaaa gcagcaattc ccgcaaaagt 720  
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 ggcaactaac cttggttagg cgcctccatc attaacccca caccaaagt taaacccccg 840  
 ctttcgctgg cactttctaa atcgaaccgc gggttaacgta accgcgggta accaaccaga 900  
 tatttttcaa ttttttccag tggcgctcta tatatcttta aacttcccct ctgcatttcc 960  
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<210> 61  
 <211> 529  
 <212> DNA  
 <213> *Eucalyptus grandis*

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ttgtcacgca tgacgtcatt aattaagcga caagacgtgc gccaaaggcca tgcattcctc 180
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gctcgactag gcctttctca accaaaccct ccaagaaagc ctaaggacag catgccctcg 300
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ctcctccact gctatatatt tcagctactc taacacactc tcatcaccac caacttcaaa 480
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<210> 62

<211> 710

<212> DNA

<213> *Eucalyptus grandis*

<400> 62

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tagctgacga gttcgaggcg caacttttct tcgattaact tttaactcga caccgatcat 180
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cccgtctttg attacagaaa aagcatgctc agaggaggag gaatgatatt tctgtttcc 300
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tcgacaagga ggtccaacta ttagcaccag aatggaaaag aagagggaga tagatagcga 420
ctaccacaag ctacattaca aggattaata taagcaaaat tactgcaata cgatattgac 480
ccgattggct ttggatgata aaaaaacaat tctatattca atcacacgtc ttcgtccccg 540
ggaaagcaat gatccaaatc atgtcaagga gctatactcc taagcccacg ttagcccaca 600
ctcttctcga aagacatatc aaatcaatac actcactctc tctattaata ttcaatttct 660
gcataatttc ttctgtcact gcccaagacg ttctgtagca ctaaggggtg 710

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<210> 63

<211> 365

<212> DNA

<213> *Pinus radiata*

<400> 63

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ggccacagtt taacggccag ccgaaaggcc ggtccgttgg gtctgccggt gacttggtcg 180
tgtgagggaa tctctggagt ccggtccggt tcttgccctg agacctacca caaccacagc 240
agttaatgca gtttacatcc tattaatata aataccaaat cgccattcca aattattatc 300
acaacaacaa atctgatttg atttcgatgc agtgaagctc ttcattttgc agtgacagtg 360
acgtt 365

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<210> 64

<211> 1304

<212> DNA

<213> *Pinus radiata*

<400> 64

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acagcaagga aatcgacagg ccataactta atgggggtcac tgtaaggcct tccggggcgt 180
aaacacgaag ctttgtacag agagtccacc caaaaacaag catcatcaca gtgacaataa 240

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tgtcaccata cctgcccctc cattgtcaca ttctatcttc tcatcttaaa caccacgcat 420
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gagtaccag acagaatgat gttgactttc tctgttttcc catcacctaa ggtatcggac 1200
acagtgggtg aaccttataa tgcaactctt tctgtacatc aattgggtgga gaatgcagat 1260
gaatgcatgg ttcttgacaa tgaagcactt tacgacattt gctt 1304

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<210> 65  
 <211> 2062  
 <212> DNA  
 <213> *Pinus radiata*

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<400> 65
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tccttttaggt tcagtgtaga tcgtctgaaa ataagttgac aaggccaggc caatgcagaa 180
gcctcctggc ttggggaccc taagtgtgaa atcaatatat ttctctcgag ttcttgacct 240
gtaggaact tcgacatgc aacttgctct aatctttgct gtgtattatg tttttgttct 300
caagtattgg agttagcac agtggatggg agagaggagg atctagatca gtcactttta 360
catagaatgg agatgatagt aaaagcaact acaattacga tcttgctacc agtcaccta 420
tggtgcatcc catgtggaga aagtggaaag ggaggcagga gtttggcgca gcgtttacca 480
gccctaggcg ttgactatgg acaaactgca gacaatcttc ctccaccatc tgcagtagca 540
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cttcaagcat ttgctaacac aggaattggg ttagttgtag gcattggtaa cgatcaaate 660
ccatctctga accagctggc tgttgacag aattggatta agaacaatat cgttcctttt 720
gttcctgcca ctgatatcat tggaaatctg gtggggaacg aggttctgtt cagtggggat 780
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aatttgaaat atgtttgtgg acagggcatt gactgtaggc ctattcaacc aggaggtcct 1620
tgctattcac caaatacagt ggcaggccat gctgcttatg ccatgaacgc atactatcag 1680

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actgcggggtc ggaacaattg gaattgtgat tttgcgcaga cggaactct tacctccaca 1740
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ttcacagaat ttgtgaatgg tagtattatt ttttatttat gtattaagga aatttaagt 2040
gtgttaaaaa aaggaaaaaa aa 2062

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<210> 66

<211> 542

<212> DNA

<213> Pinus radiata

<400> 66

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acccaatatt acgattttac accaaaatga tttccatatt tatatataaa gcctgtgagt 180
ccaaacgaag catatgaatc tgaatcgag agggaggctg gccaacacc attagctatt 240
caatgaagtt ggtagccacc caacaagtc aattcaagag tcaatcaaac caaactatga 300
ttaaaactac caaccgact ttctgagcaa cccactttcc ctccctcgct ttactttttg 360
gagtcgtggg ggatttttcc agtgtctcaa tttctataaa tttggcctca catttcctac 420
caactcattg ttaacgggag tcctcttggtc aggtccgct gcttcttggt atcacacgat 480
acctagtgat ccatagataa ctaaaatgct gtgagcagtc tgaattcttg ctttctttcc 540
cc 542

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<210> 67

<211> 349

<212> DNA

<213> Pinus radiata

<400> 67

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gtctgtatta ttatattctg ggtcactact caacccacg gtagtggcgt gacttgcgct 60
ggcgtgttac agaatccata atcagaaaac gaacggaagc tgcaaagggtg tacgtccaac 120
ggttgcgggtg aaaagccatt ggttacgtcc agcgggtggaa ttctgtaata ctgaaaggat 180
ttggttacag atggctcgac caaagacaaa atagtaatca aatattcaac cgaaagggtg 240
aaagttgctt atgggcatca cgttataaaa gtggaactcg actttcatta ccacacattt 300
ctcatttctt tctctgtact gagccattcg ttctccttcc tttcagaga 349

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<210> 68

<211> 222

<212> DNA

<213> Pinus radiata

<400> 68

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ctggcaactg gctattcctc attcgtcagt gggaatgggg tgggcagacg atcttctaga 60
gcctgtgtgg tgtggggccc ttcgactttt caatggcccg ttggtcacca gcttggaacta 120
gttttgctgt ttccatgggt acggttcgtg ctctataaaa taatttaacc gagtgggtat 180
tttgcatggg ggccggattt ccaacaatct caggtattag cg 222

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<210> 69  
 <211> 403  
 <212> DNA  
 <213> *Pinus radiata*

<400> 69  
 atctaaccga cgatctataa taatagtcaa ggaccctaaa tagaaatatg gccaccaccc 60  
 taccacgaga gcttatccta atacaaccac gaaagcccct ccactcgtgg aggttataga 120  
 tttccccgt gtaaacaat aaaaggaact tttctctttg gtgaccggca acaaccggat 180  
 actcaccggg tatcgccgaa gaagcttggt gcgagggttcg cattgaaaac cctcctctct 240  
 tcacattctt tgccgggtcat ccactcttgc catttctact tccgcctcct cttctcttcc 300  
 ctgctctagt gttttctttg cgttggtgtag tgtaaatggtt gctggtgctt catatcaata 360  
 gtggtggaat tttccttcac tgcgagcaga ttttctaagg aga 403

<210> 70  
 <211> 1032  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 70  
 gtcgttttta tattgtctag ccacattagc atgaaaaaca atgttggttt gcatttcctt 60  
 tgtcggaaaa ttgccggtt ggcatthttg ttggaatgac acttaaatga tccattttgt 120  
 tttgattttg acacttaagt attactttcc aaagtthttg cacttaagtg tccattcgca 180  
 ctaagttttg gcatttgagt gttcctccgt atcaagtttt gacatttgta atgtactttt 240  
 gctcataatg ctaatgtgat aatgagacta aattaaacat atattaaaaat ttcagaatct 300  
 acattaaata atttaaaaaat ttatgaatca tattacatat tacgataaag ttcaagaact 360  
 atattaaaaa aattaaatat ttatgggtca cattacatac gaggtaaaat ttaaggacta 420  
 tttattttgt tattttctttt tccattaaca aaaatcttcc ccacctcatt ttaattcga 480  
 gaaaagaaga aaagcaaaga aaaataatag agaggaaggg acccaactcg agattgggct 540  
 ccattgatgg aaactcgga tctactccat ctcgactcga cagcccatcc tctgaagata 600  
 acatcatcgt ccgcaccgca ttgcacccta ctttctgggc tgaatgacca cattgcccct 660  
 ccaccaaatac tatccgttgc ctgcaatgcc ggatggcaaa gcagcaattc ccgcaaaagt 720  
 ccgagcccat ttccctccgg ccaaatcgag aaaggactct tgatttttga aaactgggctg 780  
 ggcaactaac cttggttagg cgctccatc attaacccca caccaaagt aacacccccg 840  
 ctttcgctgg cactttctaa atcgaaacgc ggttaacgta accgcgggta accaaccaga 900  
 tatttttcaa ttttttccag tggcgctcta tatatcttta aacttcccct ctgcatttcc 960  
 catcagctct gcaagtcctc ctccatcttc ttcttcttca tcgtcatctt ctcggaaggc 1020  
 gtcttgataa ac 1032

<210> 71  
 <211> 1039  
 <212> DNA  
 <213> *Pinus radiata*

<400> 71  
 aaataggcta aattagagaa atactatggg ttgtcaaaac ctagaatacg ataatttgac 60  
 cgaaatattt agataatgta acataacatg acatgacatt acaacatctc ttccatagag 120  
 aatctctcaa taaaataaaa tattgcacaa acaaaaccaa ctcaaaactc aatttatatt 180  
 acacaatata ataataaaca atttcaatta aaacattttt acctttattt attataaac 240  
 ctacactaa cacattgtta aaaaagtaaa ataaaataac aaacgcata taaaccata 300  
 aaaatttcca aaacaatatt aatatcttta tcatagtttt taagctaaag ttgatgatc 360  
 ctttaacatt actagccaca aggatgctta cttccttgca aaataacaat gcaagagacc 420

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aacgcagtga tatgtgattt aacggtaagt atggttgggt gaaaccaaca agactgcagt 480
tcaaattcca ttgagtatat ggcctgctat gatctcagct tggtgaaacc aacaagactg 540
cagttcaa at ct aaatccca ttaattatgt gacctactat aatctgggct taaggagtag 600
gttgctcgct atgttttgggt gttataaagt agccataaag attaaacctc aagctcccct 660
aaattaatcc aagaaattac cgattcatta taattaaaaa aaatgcaa at acccacctta 720
aagaaaaaca atgtaaagag caatgaaatc aatttaattg tcttctttta acaccaataa 780
aaatttataa aaacctcata attaaaaaca aagcgtaga cttttggaat aaccttcctt 840
aattgcttct ctaatttatg atttctaagt cataccacga tcggtcgttt tagcaaaagc 900
ctgaaaggca agtagaagat aaacgtatgc ttggaaataa atatatgtca tttttcattt 960
tatatccttc gaatccgtca ttcgtctgaa tgatcagaca aaccctccca gatcctgctc 1020
tgttctgaag cataaacct                                     1039

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<210> 72

<211> 13

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 72

aatcaa atcc tcc

13

<210> 73

<211> 13

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 73

aatcaa atcc tcc

13

<210> 74

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 74

tctccctcct ct

12

<210> 75  
<211> 13  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 75  
ataaagaagt gaa

13

<210> 76  
<211> 14  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 76  
taaacttatt ttct

14

<210> 77  
<211> 14  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 77  
taaacttatt ttct

14

<210> 78  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 78  
ggagaaacaa aa

12

<210> 79  
<211> 16  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 79  
aagtaaccaa tgatgc

16

<210> 80  
<211> 13  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 80  
actttgaaga aaa

13

<210> 81  
<211> 11  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 81  
tgaggagaag a

11

<210> 82  
<211> 11  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 82  
atcaagctga t

11

<210> 83  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 83  
aatttcattt tc

12

<210> 84  
<211> 13  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide motif sequence

<400> 84  
taaatttgaa ttt

13

<210> 85  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide sequence

<400> 85  
aaatataaca taatctaact attgatgtac attattcgcc

40

<210> 86  
<211> 10  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide sequence

<400> 86  
cccacctacc

10